

**CLOSED
CITY OF HELENA LANDFILL
LICENSE NUMBER 90**

HYDROMETRICS

**STATISTICAL EVALUATION OF SEPTEMBER
1999 AND DECEMBER 1999 GROUNDWATER
QUALITY DATA**

MARCH 2000

**IS LOCATED IN THE GROUNDWATER
MONITORING REPORTS ARCHIVE,
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CLOSED
CITY OF HELENA LANDFILL
LICENSE NUMBER 90

HYDROMETRICS

RESULTS OF DECEMBER 1999
GROUNDWATER SAMPLING

FEBRUARY 2000

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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REPORT OF THE
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FOR THE YEAR 1901

AS FURNISHED TO THE COMMISSIONER
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November 23, 1999

Ms. Pat Potts
Montana Department of Environmental Quality
Permitting and Compliance Division
WMD / SWP
P.O. Box 200901
Helena, MT 59620

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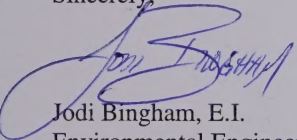
NOV 26 1999

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

Dear Pat,

Enclosed for your review are the proposed monitoring sites and analytical schedule for the December 1999 semiannual groundwater monitoring at the Helena Landfill. Changes to the typical semiannual monitoring include the addition of wells HL-99-1, HL-99-2, and HL-99-3, the newly installed golf course irrigation wells, and irrigation well I-4. In addition, residential wells 18, 62, and 90 were added and residential wells 13, 31, 75, 93, and 96 were removed. We feel that these changes will better characterize landfill contamination downgradient of City property while eliminating those wells that do not provide useful information. Please call if you have any questions or comments.

Sincerely,


Jodi Bingham, E.I.
Environmental Engineer/Chemist

c: Jeff Towery, City of Helena

County Lewis & Clark Co
Facility & # City of Helena 70
Closure (closed) Landfarm
Finan Assur. inactive Liner
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**HELENA LANDFILL
DECEMBER 1999 SAMPLE SITE AND PARAMETER LIST**

Site Name	Parameter
Monitoring Wells ⁽¹⁾	
83-6	Table 1
HL-94-1	Table 1
I-1	Table 1 VOC's only
HL-94-2	Table 1
HL-90-3	Table 1
HL-90-3 (duplicate)	Table 1
INF. GALLERY	Table 1 VOC's only
HL-94-3	Table 1
MPC-2	Table 1 VOC's only
HL-90-2	Table 1
HL-99-3	Table 1
EPA-1	Table 1
HL-99-2	Table 1
MPC-1	Table 1
MPC-5	Table 1
HL-99-1	Table 1
I-4	Table 1 VOC's only
HL-90-1	Table 1
Residential Wells:	
5	Table 1 VOC's only
18	Table 1 VOC's only
40	Table 1 VOC's only
48	Table 1 VOC's only
52	Table 1 VOC's only
57	Table 1 VOC's only
62	Table 1 VOC's only
84	Table 1 VOC's only
90	Table 1 VOC's only
Quality Control:	
DI Blank	Table 1
Rinsate Blank	Table 1

(1) Monitoring wells are listed in the order to be sampled.

**CLOSED
CITY OF HELENA LANDFILL
LICENSE NUMBER 90**

HYDROMETRICS

**RESULTS OF SEPTEMBER 1999
GROUNDWATER SAMPLING**

OCTOBER 1999

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CITY OF HELENA LANDFILL
LICENSE NUMBER 90

HYDROMETRICS

STATISTICAL EVALUATION OF MARCH 1999
AND JUNE 1999 GROUNDWATER QUALITY
DATA

SEPTEMBER 1999

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September 1, 1999

Ms. Pat Potts
Montana Department of Environmental Quality
Permitting and Compliance Division
WMD / SWP
P.O. Box 200901
Helena, MT 59620

Dear Pat,

Enclosed for your review are the proposed monitoring sites and analytical schedule for the September 1999 quarterly groundwater monitoring at the Helena Landfill. Wells 5, 6, and 48 are being sampled as part of the City's Action Plan for tetrachloroethene (PCE) in downgradient domestic wells. Please call if you have any questions or comments.

Sincerely,

Jodi Bingham, E.I.
Environmental Engineer/Chemist

c: Jeff Towery, City of Helena

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SEP 02 1999
MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

**HELENA LANDFILL
SEPTEMBER 1999 SAMPLE SITE AND PARAMETER LIST**

Site Name	Parameter
Monitoring Wells ⁽¹⁾	
HL-90-1	Table 1 VOC's only
MPC-1	Table 1 VOC's only
5	Table 1 VOC's only
48	Table 1 VOC's only
6	Table 1 VOC's only

(1) Wells are listed in the order to be sampled.

**CLOSED
CITY OF HELENA LANDFILL
LICENSE NUMBER 90**

HYDROMETRICS

**RESULTS OF JUNE 1999 GROUNDWATER
SAMPLING**

AUGUST 1999

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May 25, 1999

Ms. Pat Potts
Montana Department of Environmental Quality
Permitting and Compliance Division
WMD / SWP
P.O. Box 200901
Helena, MT 59620

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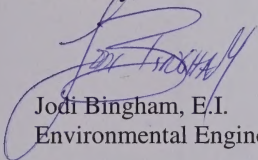
MAY 27 1999

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

Dear Pat,

Enclosed for your review are the proposed monitoring sites and analytical schedule for the June 1999 semiannual groundwater monitoring at the Helena Landfill. Changes to the typical semiannual monitoring include well MPC-5 which will be monitored for all of the Table 1 parameters to help establish upgradient nitrate concentrations and well 48 which will be used to better determine PCE concentrations downgradient of City property. Please call if you have any questions or comments.

Sincerely,


Jodi Bingham, E.I.
Environmental Engineer/Chemist

c: Ted Hill, City of Helena

**HELENA LANDFILL
JUNE 1999 SAMPLE SITE AND PARAMETER LIST**

Site Name	Parameter
Monitoring Wells ⁽¹⁾	
83-6	Table 1
HL-94-1	Table 1
HL-94-2	Table 1
HL-94-3	Table 1
INF. GALLERY	Table 1 VOC's only
HL-90-3	Table 1
HL-90-3 (duplicate)	Table 1
I-1	Table 1 VOC's only
MPC-2	Table 1 VOC's only
HL-90-2	Table 1
HL-90-1	Table 1
MPC-1	Table 1
MPC-5	Table 1
EPA-1	Table 1
Residential Wells:	
5	Table 1 VOC's only
13	Table 1 VOC's only
31	Table 1 VOC's only
40	Table 1 VOC's only
48	Table 1 VOC's only
52	Table 1 VOC's only
57	Table 1 VOC's only
75	Table 1 VOC's only
84	Table 1 VOC's only
93	Table 1 VOC's only
96	Table 1 VOC's only
Quality Control:	
DI Blank	Table 1
Rinsate Blank	Table 1

(1) Monitoring wells are listed in the order to be sampled.

**CLOSED
CITY OF HELENA LANDFILL
LICENSE NUMBER 90**

HYDROMETRICS

**RESULTS OF MARCH 1999 GROUNDWATER
SAMPLING**

APRIL 1999

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